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4.100 SMALL POWER PRODUCTION AND COGENERATION

4.101 Purpose

The purpose of this rule is to encourage development of electricity through use of biomass, other renewable resources, waste and cogeneration, while giving due consideration to the duties and responsibilities of utilities. The rule implements the provisions of 30 V.S.A. § 209(a)(8) and 16 U.S.C. § 824a-3.

4.102 Scope

- (A) This rule applies to Vermont electric utilities and to those qualifying facilities that fall within the definitions contained in 30 V.S.A. §209(a)(8) or 18 C.F.R. §§292.201-207.
- (B) This rule shall not be construed as prohibiting voluntary contracts with terms different from the terms contained herein. Every contract for the purchase of electricity by a Vermont utility from a qualifying facility shall be filed with the Board and with the Department of Public Service, in accordance with General Order 45 or any successor rule.
- (C) The Board may by order designate one or more Purchasing Agents. Such an order may define appropriate terms and conditions, including the rights, authority, duties and obligations of the Purchasing Agent, and the authority of the Board to regulate and supervise the Purchasing Agent. In such an Order the Board may incorporate provisions that reflect its consideration of such factors as:
 - ownership, management, financial stability and expertise of the purchasing
 - issuance of indebtedness by, and protection of the assets of, the purchasing
 - changes in management or control of the purchasing agent,
 - the quality and value of the services provided by the purchasing agent,
 - the continuance or the abandonment of provision of service by the purchasing agent,
 - the manner of operating and conducting business by the purchasing agent,
 - the prices, terms, or rates charged by the purchasing agent, and
 - the general good of the State.

If the Purchasing Agent accepts such a designation, the Purchasing Agent, and all parties which transact business with the Purchasing Agent, shall, in the conduct of their business under this Rule, be subject to the terms and conditions of the designation order. Any previous designation shall remain in full force and effect unless and until specifically modified by the Board on a prospective basis.

4.103 Definitions

- (A) For purposes of this rule, the following definitions apply:
 - "Avoided cost" means the incremental cost to electric utilities of electric energy or capacity or both, which, but for the purchase from the qualifying facility,

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such utilities would generate themselves or purchase from another source.

2. "Capacity" means the capability to produce, transmit or deliver electric energy, measured in kilowatts (KW).

- 3. "Capacity costs" means the costs associated with providing the capability to produce, transmit or deliver energy. They consist of the capital costs of facilities used to generate, transmit and distribute electricity and the fixed operating and maintenance costs of those facilities.
- 4. "Energy" means electric energy measured in kilowatt-hours (KWH).
- 5. "Energy costs" means the variable costs associated with the production of electric energy. They consist of fuel costs and variable operating and maintenance expenses.
- 6. "Firm capability" means the accredited New England Power Pool capacity rating of the qualifying facility, which may be used by the utility or purchasing agent as a capacity source in meeting its capability responsibility as defined by NEPOOL.
- 7. "Levelized rate" means the result of the use of present worth arithmetic to convert a series of annual rates to an equivalent annuity.
- 8. "Purchasing agent" means an entity designated by the Board to perform the power and financial accounting requirements of this rule.
- 9. "Qualifying facility" means a cogeneration facility or a small power production facility, which is a qualifying facility under 18 C.F.R. §\$292.201–207 and 30 V.S.A. §209(a)(8), and which has received a certificate of public good under 30 V.S.A. §248 or other construction and operating authority under any other applicable state statute.
- 10. "Reserve fund" means a trust fund established by the qualifying facility to be used solely for the purposes specified in 4.104(E)6. Any investment by the qualifying facility of reserve fund assets shall be limited to Qualified Investments described below, with maturities at or before the time when such assets are required to be available. Interest or profit derived therefrom shall not be deemed part of the reserve fund and may be used for any lawful purpose by the qualifying facility. The term "Qualified Investments" means (a) obligations issued by the United States of America or any agency or instrumentality thereof, (b) re-purchase agreements with respect to obligations described in clause (a), above, (c) certificates of deposit of a bank or trust company, (d) daily interest savings accounts in a bank or trust company to the extent of any deposit insurance applicable to such accounts, (e) short-term money market funds in which a trustee customarily invests moneys entrusted to it in a fiduciary capacity, (f) securities commonly known as "commercial paper" issued by any company organized and existing under the laws of the United States of America which at the time of purchase have been rated and the ratings for which are not less than "P - 1" if rated by Moody's Investors Service, Inc. and not less than

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> "A-1" if rated by Standard and Poor's Corporation, or (g) bankers acceptances drawn on or accepted by a bank or trust company described in clause (c) above.

- 11. "Vermont composite electric utility system" means the combined generation, transmission and distribution resources along with the combined retail load requirements of the Vermont retail electric utilities.
- 12. "Interconnecting utility" means the electric utility in whose service territory the qualifying facility is located and/or to whose electric system the qualifying facility is connected.
- 13. "Electricity" means energy or capacity or both.

4.104 <u>Utility Purchase of Small Power Producer Output</u>

- (A) The purchasing agent for the Vermont retail electric utility companies shall purchase electricity offered by any qualifying facility located within Vermont (or within the service territory of any utility which is an all-requirements customer of a Vermont utility) with an installed capacity greater than one hundred kilowatts or with a lesser capacity if the interconnecting utility has obtained an exemption under section 4.104(B). The purchasing agent shall not be empowered to enter into any agreement for purchases from a qualifying facility until such agreement shall have been approved by the Board. Such approval shall be granted only after notice to the purchasing agent, the qualifying facility and all Vermont retail electric utility companies and opportunity for a hearing. The rate to be paid for such electricity shall be based on the full avoided costs of the alternative energy sources of the Vermont composite electric utility system, as specified under 4.104(E). The electricity purchased and the costs associated therewith shall be distributed to the Vermont retail electric utilities based on their pro-rata share of total Vermont retail kilowatt-hour sales for the previous calendar year, for distributions commencing May 1st of each year. Notwithstanding the foregoing, the purchasing agent shall be liable for payment for electricity purchased from qualifying facilities only to the extent that the utilities to which such electricity has been distributed have paid the purchasing agent therefor. In no event shall the State of Vermont or any agency or employee thereof be held liable, in this or any other respect, for the failure of any party to comply with these rules. Regardless of whether a retail electric utility company accepts the electricity or costs distributed to it by the purchasing agent, it shall be responsible for the payment of costs allocated to it by the purchasing agent in compliance with these rules.
- (B) The interconnecting retail electric utility shall purchase electricity offered by any qualifying facility located within Vermont (or within the service territory of a utility which is an all-requirements customer of a Vermont utility) with an installed capacity of one hundred kilowatts or less, unless the qualifying facility elects to sell to the purchasing agent under 4.104(A), provided that the utility may obtain an exception to this requirement for good cause shown. The rate to be paid for such electricity shall be based on the full avoided costs of the alternative energy sources of the Vermont composite electric utility system, as specified under 4.104(E). If a qualifying facility agrees, a utility which would otherwise be obligated to purchase electricity offered by the qualifying facility under 4.104(B), may transmit the electricity to any other utility. Any electric utility to which such electricity is

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transmitted shall purchase such electricity as if it were the interconnecting utility in 4.104(B). The utility required to purchase electricity under this subsection shall not be subject to charges for transmission; such charges shall be governed by the provisions of 4.108(B).

- (C) The purchasing agent shall issue bills to utilities as soon as possible after the end of each month and, in any event, in time to assure receipt through the ordinary operation of the postal service by the 10th of the succeeding month. Utilities receiving such bills shall cause payment therefor to be delivered to the purchasing agent not later than the 25th of such succeeding month or, if the bill shall have arrived after the 10th, within fifteen days of its receipt. If payment is not made when due under the provisions hereof, one percent of the amount unpaid shall be added as liquidated damages, and an additional one and one-half percent interest shall be added every thirty days thereafter; provided, that for good cause, the purchasing agent or the Board may waive all or part of such damages.
- (D) The purchasing agent may assess against qualifying facilities and electric utilities, from each group in equal shares, fees in amounts set in accordance with this subsection. Such fees shall be retained by the purchasing agent and shall be set so as to cover its reasonable and necessary expenses of performing its functions under this Rule in accordance with generally accepted utility ratemaking practices.
 - (i) Not less than thirty days prior to the time that the proposed fee schedule is intended to take effect, the purchasing agent shall file the proposed fee schedule and adequate supporting financial statements with the Board. Copies of the filing and supporting material shall be served on the Department of Public Service, and upon all Vermont retail electric utilities and qualifying facilities selling, or having filed letters of intent to sell, through the purchasing agent. If no written objection to the proposed fee schedule is filed within 15 days of filing, the Board may allow such schedule to take effect without a hearing.
 - (ii) Upon receipt of a written objection timely filed or upon its own motion, the Board may open an investigation into the proposed fee schedule and may suspend its implementation. After hearing, the Board may approve, modify or reject the proposed fee schedule. If the Board fails to make its determination within 120 days of the issuance of an order opening an investigation, the proposed schedules shall become effective and final.
 - (iii) Nothing in this subsection shall be construed as limiting the right of the Board to investigate at any time the reasonableness of fees assessed by the purchasing agent pursuant to this subsection.
 - (iv) At any time after Board approval of a fee schedule, any Vermont retail electric utility may request a prospective reduction in the fees assessed against utilities on the grounds that the avoided costs of contract administration and overhead associated with power purchases for the Vermont composite electric utility system are significantly lower than the sum of the fees charged to such utilities under the schedule approved by the Board. Such a request shall be filed with the Board and served upon the purchasing agent and shall include adequate supporting financial statements. If the Board fails to rule upon such a request within seven months it shall be deemed to be final and effective. However, a reduction in such fees shall be granted only on a clear showing that the approved fees exceed such costs, and fees which have previously been approved by the

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Board under this paragraph shall be presumed not to exceed such costs. The petitioner in such case shall bear the burden of proof.

- (E) The Department of Public Service shall annually determine the avoided capacity and energy costs of the Vermont composite electric utility system, and shall file proposed rate schedules with the Board for approval, and the Board, after hearing, shall approve or modify such schedules. The proposed rates shall be for the period of delivery of power and shall reflect the following sales options available to the qualifying facility:
 - 1. Short-term sales shall have a term of one year and shall be based on projected avoided energy costs associated with various levels of purchases from qualifying facilities, as adjusted for transmission and distribution loss credits, if any, for the period. The rates shall be seasonally and time-of-day differentiated.
 - Long-term non-firm sales shall have a term of five, ten, or fifteen years and shall
 be based on projected avoided energy costs associated with various levels of
 purchases from qualifying facilities, as adjusted for transmission and
 distribution loss credits, if any, for those periods. The rates shall be seasonally
 and time-of-day differentiated.
 - 3. Long-term firm sales shall have a term of ten, twenty, or thirty years and shall be based on projected avoided system energy costs and projected incremental costs of peaking capacity associated with various levels of purchases from qualifying facilities, as adjusted for transmission and distribution loss credits, if any, for those periods. The rates shall be seasonally and time-of-day differentiated. A qualifying facility shall be entitled to be paid the capacity-based portion of a long-term firm rate only to the extent of its firm capacity.
 - 4. All rates shall be in terms of cents per kilowatt-hour (¢/KWH), and the level of purchases from qualifying facilities shall be modeled in twenty-five MW blocks.
 - 5. Long-term sales rates, both firm and non-firm, shall be determined on a levelized and non-levelized basis. The capacity and energy components of long-term firm rates shall be determined separately. A qualifying facility which is eligible for firm rates may elect non-levelized rates or, with the permission of the Board, fully levelized rates, or a levelized capacity component and non-levelized energy components. In the latter case, the qualifying facility shall be paid, in addition to the capacity component, the short-term energy rate in effect while deliveries are being made, provided that a change in energy rates shall, in such cases, be deemed to take effect only at the beginning of any month.
 - 6. A qualifying facility seeking a long-term levelized firm rate shall establish a reserve fund to cover anticipated capital replacements and maintenance requirements over the term of the sales period, and shall be required to maintain adequate business interruption insurance, property damage insurance and liability insurance.
 - 7. A qualifying facility seeking a long-term levelized non-firm rate shall not be required to establish the reserve fund as required in 4.104(E)6, but shall maintain insurance coverages as required therein.

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(E)¹ At the conclusion of each rate-setting proceeding held pursuant to section 4.104(E), the purchasing agent shall submit to each Vermont electric utility, and each such utility shall execute, a contract by which the utility signifies its agreement to accept and to pay for all electricity properly allocated to it by the purchasing agent at the rates finally approved by the Board. Purchase agreements executed by the purchasing agent shall make reference to such contract, but nothing provided for herein shall obligate any utility, other than an interconnecting utility, with respect to matters other than its purchase obligation.

- (F)² Neither the qualifying facility nor the purchaser may unilaterally alter the duration of the sales period or the terms and conditions of the transaction after it has become effective. After notice and hearing, the Board may alter such contracts for good cause but, except to the extent that alteration is permitted by the terms of the contract, no such alteration may be made over the objection of any utility or of the qualifying facility if it would materially affect substantial rights or obligations of either the utility or of the ratepaying public.
- (G)³ All existing projects, as well as those which have received or petitioned for Public Service Board approval prior to December 3, 1982, will be entitled to a minimum rate of 7.8¢/KWH until June 1, 1984. At that time and on each subsequent June 1st, the minimum rate shall be decreased by 10%. A potential qualifying facility which has, prior to December 3, 1982, incurred project development costs predicated upon the 7.8¢/KWH rate, but which had not filed for Public Service Board approval by that date, may petition the Board for similar treatment. At any time, such a qualifying facility may elect to sell its output pursuant to the other provisions of this rule.
- (H)⁴ Notwithstanding any other provision herein, long-term rates and levelized rates shall be available only to qualifying facilities which have been found by the Board, after due hearing, to satisfy the substantive criteria of 30 V.S.A. §248(b).

4.105 <u>Utility Sale of Electricity</u>

- (A) Rates for sales to qualifying facilities shall not discriminate against qualifying facilities in comparison to rates for sales to other customers served by the electric utility. Rates for sales which are based on accurate data and consistent system-wide costing principles shall not be considered to discriminate against any qualifying facility to the extent that such rates apply to the utility's other customers with a similar load or other cost-related characteristics. Optional rates shall not be mandated by the interconnecting utility.
- (B) Upon the request of a qualifying facility, the interconnecting utility shall, by tariff or by special contract, provide the following: supplementary power; back-up power; maintenance power; and interruptible power. Rates for these sales shall not be based upon the assumption (unless supported by factual data) that forced outages or other

^{1.} This paragraph should have been designated letter (F) instead of (E) in the original.

^{2.} This paragraph should have been designated letter (G) instead of (F) in the original.

^{3.} This paragraph should have been designated letter (H) instead of (G) in the original.

^{4.} This paragraph should have been designated letter (I) instead of (H) in the original.

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reductions in electric output by all qualifying facilities on the interconnecting utility's system will occur simultaneously, or during the system peak, or both.

4.106 Interconnection and Operating Standards

- (A) The following shall be the minimum standards applicable to the purchase of electricity from a qualifying facility by a utility or by the purchasing agent.
 - 1. There shall be circuit breakers which automatically disconnect current for line to ground faults and, if applicable, phase to phase and three-phase faults.
 - 2. The qualifying facility's circuit breaker shall be inhibited from automatically or manually closing into the utility's system if the system is de-energized. Qualifying facilities that are inherently incapable of operating in such a case need no further equipment.
 - 3. All interconnections shall have equipment to allow manual isolation of the qualifying facility, which equipment shall be accessible to utility employees.
 - 4. There shall be adequate assurance that the utility system is protected from any qualifying facility electricity that varies more than ± 10% of system voltage or more than ± 1% of system frequency. This assurance is satisfied if (1) the qualifying facility is inherently incapable of supplying electricity with such variations, (2) there is equipment that automatically isolates the qualifying facility if such variation occurs or (3) there is equipment sufficient to protect the utility if such variation occurs.
 - 5. There shall be adequate assurance of proper synchronization, including resynchronization following interruptions.
 - 6. The qualifying facility shall provide a power factor which is sufficient to maintain system voltage within standard operating limits (97% to 105% of nominal).
- (B) The protective relaying equipment required under Section 4.106(A) shall meet the following requirements:
 - 1. The ambient temperature rating of the device, as certified by the manufacturer, must be sufficient for the environment in which it must operate.
 - 2. The device must be certified to pass a high potential test which is similar to or in accordance with that required by ANSI standards for other equipment in the same voltage class.
 - 3. The ability of the device to withstand transients and surges must be tested and certified to be in compliance with ANSI C 37.90a 1974.
 - 4. The device must perform the required function within the accuracy necessary to comply with this rule.
- (C) For good cause shown, the Board may require stricter standards, provided they are standards generally applicable in the industry.

4.107 Metering

- (A) The interconnecting utility, the purchasing utility or the purchasing agent may require a meter to measure the output of the qualifying facility in addition to the retail meter, if applicable.
 - 1. The purchasing agent shall determine the metering requirements of the

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> qualifying facilities from which it purchases electricity with due consideration of the power accounting requirements of the utilities.

A utility which purchases electricity from a qualifying facility whose installed capacity is one hundred KW or less shall not require the hourly metering of output except upon Board order for good cause shown.

4.108 Allocation of Metering and Interconnection Costs

- (A) The qualifying facility shall pay the reasonable costs of connection, switching, metering, transmission distribution, safety provisions and administrative costs directly related to the installation and maintenance of the physical facilities necessary to permit interconnected operations to the extent that such costs are in excess of the corresponding costs which the utility would have incurred if it had purchased an equivalent amount of electric energy or capacity from other sources. Any costs which would have been incurred if the qualifying facility had received only retail electric service shall be governed by the applicable retail tariff. The interconnecting utility shall offer the qualifying facility the option of paying such costs at the time they are incurred or over a period of twelve months in equal monthly installments, including interest at a rate equal to the utility's current allowed rate of return on equity.
- (B) Qualifying facilities shall not be charged by the interconnecting utilities for the transmission of their electricity to other utilities, unless the transmitting utility can demonstrate that it must actually reserve transmission system capacity for that purpose.

4.109 **Exemption from Utility Regulation**

Those qualifying facilities within the scope of this general order and which sell electricity only at wholesale shall be exempt from all regulation under Title 30 except under 30 V.S.A. §§202, 209(a)(3), 209(a)(8), 214 and 248. Qualifying facilities which meet the above definitions and whose facilities have an installed capacity of ten KW or less shall be exempt from all regulation under Title 30 except 30 V.S.A. §\$209(a)(3), 209(a)(8) and 248. The Board may expand or reduce the scope of these exemptions for good cause shown.

4.110 Reporting Requirements

When requested by the Board, qualifying facilities shall submit information concerning the operation, management and physical condition of a particular facility as necessary for the Board to insure the safe operation and management of the particular facility.

4.111 Exceptions

- (A) The Public Service Board may grant exceptions to the requirements of this rule for good cause shown. The petitioner in such case shall bear the burden of proof.
- (B) A utility seeking exemption from the purchase requirements of Section 4.104 shall, at a minimum, satisfy the following requirements:
 - A petition for exemption and supporting documentation shall be filed with the Board within thirty days of the annual adoption of rate schedules pursuant to 4.104(C).
 - The supporting documentation shall include complete rate schedules, and statistical and technical foundation that is directly comparable in format and

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detail to the evidence offered by the Department of Public Service in its filing.

3. Any petition which is found deficient shall be dismissed by the Board.

4.112 Utility Ratemaking

All reasonable costs incurred by a utility pursuant to this rule shall be included in that utility's revenue requirement for ratemaking purposes.

4.113 Effective Date and Filing Requirements

This rule shall become effective fifteen days after adoption and filing. Within forty-five days thereafter, and then annually on or before April 1, the Department of Public Service shall file proposed rate schedules which conform to this rule.